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Lack of Transportation Opportunities for Physically Disabled Individuals in Urban Cities

Author: Yujin Baik

Korea International School

ybaik25@student.kis.or.kr

ABSTRACT

Access to transportation often poses a significant challenge for the physically disabled in urban settings despite the infrastructural and technological developments. This paper examines the lack of transportation opportunities experienced by physically disabled individuals in urban cities. It is observed that two significant barriers - physical inaccessibility and high costs – contribute significantly to this problem. These barriers have multidimensional effects and are categorized into three main groups: social isolation, economic disadvantage, and limitations in accessing financial services. This paper also uses case studies to examine how these challenges reflect a pattern of exclusion embedded in system-wide barriers. Based on these findings, solutions are recommended that can improve the access of physically disabled people to public transportation.

1. INTRODUCTION

As society continues to evolve in this contemporary age, it comes as no surprise that there are more urban cities that are more ample and innovatively advanced than ever before. Modern cities are now characterized by technological advancements and innovations such as subway systems, seemingly never-ending skyscrapers, escalators, etc (Lee). However, despite all of these progressions, it can be observed that urban cities still lack primary facilities that would enhance the inclusivity of all vulnerable groups, such as people with disability. For instance, the a lack of accessibility to transportation for disabled people. Contrary to certain beliefs, the relative population of disabled individuals in society exceeds expectations. According to statistics from the Institute of Medicine (US): " In 2000, just over 8 percent of those ages 5 to 20 years, 19.2 percent of those ages 21 to 64 years, and 41.9 percent of those ages 65 years and over reported some level of disability"(Rosenbloom). Thus, with a large proportion of people being disabled, a certain level of emphasis on opportunities for disabled people to integrate into society seems crucial. However, urban environments often lack adequate transportation options for physically disabled individuals, creating barriers and leading to social isolation, economic disadvantage, and limited access to essential services. Thus, this paper aims to examine the lack of transportation opportunities for physically disabled individuals in urban areas with the hopes of providing valuable insights that can be used to develop strategies to address this challenge.

2. CHALLENGES FACED B PHYSICALLY DISABLED INDIVIDUALS IN URBAN TRANSPORTATION

It can be observed that as urban cities continue to grow in population, the development of transportation opportunities also increases. For most of the population, transportation in the city is simple and easily navigated. Jirgba et al. explain that safe, efficient, and accessible transportation is a key component of community integration in urban cities. However, the situation for physically disabled people raises concerns (Sze & Christensen). Many transportation perks of the urban city are often overshadowed by their inaccessibility for physically disabled people (Rosenbloom). Furthermore, Rosenbloom posits that this inaccessibility is often displayed in the form of two significant barriers: accessibility barriers and cost barriers.

Accessibility barriers refer to physical barriers within cities. Despite all the advancements in the transportation sector of urban cities, efforts to make transportation easier for physically disabled people remain stagnant. Although people in cities have access to escalators in mall buildings, rentable scooters ready for use on sidewalks, stairs to access the subway system, etc., none of these transportation devices is accessible toysically disabled people (Jirgba et al.). In a

congressionally mandated comparative study conducted in 2002, the U.S. Bureau of Transportation Statistics (BTS) gathered information on the travel patterns of people of various ages with and without disabilities. Of the 5,019 people interviewed, 2,321 of them reported to have a disability ranging from mild to severe. Through the results of the study, Rosenbloom gathered that "almost 2 million people, or roughly 4 percent of those with a self-reported disability," reported having a disability so extreme that the individuals were "unable or unwilling to leave their houses" (Rosenbloom). The results of the survey illustrate that the lack of accessible transportation essentially casts most people with disabilities into extremes of social isolation. This explains how physical barriers relating to inaccessible infrastructure reinforce exclusionary and unequal urban space. Thus, although public transportation is inherently free and available to all, this physical barrier presents a contrasting view of this perceived freedom to travel (Sze & Christensen).

The second significant barrier - cost barriers – relates to the high prices of specialized transportation services. As physically disabled people struggle to travel from one place to another, they rely heavily on specialized transportation services (Venter et al.). For people with physical disabilities, specialized transportation services guarantee accessible and safe movement in metropolitan settings, overriding the gaps left by conventional public transportation networks (Venter et al.). However, Millar and Kline highlight that cost barriers may often limit accessibility to these specialized transportation opportunities. The authors suggest that specialized transportation programs are particularly expensive due to their complex services, accessible vehicles, and trained personnel, making it difficult for these programs to remain economically viable. Thus, Millar and Kline explain that the "operating costs of specialized services for the elderly and handicapped are often high relative to the number of passengers served" (Millar & Kline). In essence, this implies that the combination of abnormally high costs and limited funding can result in a lack of appropriate transportation for persons with disabilities, perpetuating their marginalization in urban society.

Additionally, another related issue in the discussion of cost barriers is the funding usage of nonprofit organizations. According to Millar and Kline, "Despite the robust budgets presented for transportation services, nonprofit organizations are not spending the funds allotted to them by the funding agencies" (Millar & Kline). The existing usage of specialized transportation services creates an illusion of management and care; in actuality, mismanagement of resources has hindered the effectiveness of these services in improving mobility for physically disabled individuals. This inefficiency raises concerns about accountability and the impact of these organizations on enhancing transportation accessibility in urban areas. Without an affordable or reliable source of regulated specialized transportation for physically disabled individuals in urban cities, ultimately, they find themselves contemplating the dilemma: Is it worth traveling when transportation is simply disreputable? Moreover, research indicates that the impact of these barriers on the physically disabled can be significant.

3. IMPACT OF LIMITED TRANSPORTATION OPTIONS ON PHYSICALLY DISABLED INDIVIDUALS

For physically disabled people, the impact of these accessibility and cost barriers can be seen in how it has affected their lifestyle. These people are left with very limited options, given the social and financial situations presented to them. These impacts can be grouped into three categories: social isolation, economic disadvantage, and limited access to financial services.

Regarding social isolation, it can be observed that physically disabled people often find themselves incidentally socially isolated from the rest of society due to the absence of proper methods of transportation or proper assistance from public transportation workers and/or citizens. Attesting to this, Best et al. conducted a study and collected data to examine the barriers and facilitators of public transport use among people with disabilities. In the study, it was observed that in the context of the public transportation experience of physically disabled individuals, "emotional reaction can reduce self-efficacy" (Best et al.). Without the necessary tools to demonstrate positive experiences of public transportation for physically disabled people, it's easy to mistakenly blame oneself for its inefficiencies. The researchers add that "negative experiences can induce negative emotional reactions such as anxiety and doubt, which in turn may impact self-efficacy for using public transport" (Best et al.). Thus, the inaccessibility of public transportation causes physically disabled people to wrongfully convict themselves to responsibility, leading to a lack of self-confidence that promotes social isolation.

Furthermore, the inaccessibility to public transportation also leads to economic disadvantages. When transport systems are deficient in terms of capacity or reliability, they can have an economic cost, such as reduced or missed opportunities and lower quality of life (Sze & Christensen). Additionally, like many other problems in society, the quality of public transportation for physically disabled people is often associated with one's financial situation. Simply put, financial resources afford disabled people better treatment and benefits, while limited funds lead to a lack of these opportunities. Attesting to this, Rosenbloom uses a 2004 NOD-Harris Interactive poll to portray that "almost two-thirds of all the people with disabilities who reported major transportation problems had annual incomes below $35,000. For those with higher incomes, reported transportation problems dropped markedly" (Rosenbloom). Transportation difficulties decreased considerably with an increase in the income of the physically disabled in urban cities. This claim seems to be the consensus among multiple researchers. Rosenbloom finds that the U.S. Congressional Budget Office and the U.S. Senate Select Committee on Aging concluded that "almost all transportation problems among the elderly or those of any age with disabilities were related to income alone" and that "reported transportation problems dropped drastically with rising income, even controlling for age, physical disability, and health status"(Rosenbloom). Without money, the statistical level of dissatisfaction increases. It seems that income is an important determinant of relatively easy and accessible transportation overall.

Lastly, inaccessibility to public transportation also leads to limited access to financial services. Physically disabled individuals usually find themselves in a situation with limited access to financial services. Rosenbloom explains in a journal article that "complementary paratransit services are a lifeline for many individuals with disabilities... barriers frequently encountered prevent individuals from having necessary transportation to meet daily needs" (Rosenbloom). Paratransit services are necessary to fulfill the fundamental transportation solicitation for physically disabled individuals. Barriers to utilizing these services prevent people from meeting their everyday needs. Financial resources are important, and with the inability to physically move about, it can be more difficult for physically disabled individuals to access essential services like employment and healthcare (Rosenbloom).

4. CASE STUDIES OF URBAN AREAS WITH INADEQUATE TRANSPORTATION FOR PHYSICALLY DISABLED INDIVIDUALS

According to research, some notable cities are making progress in providing public transportation services that can be accessible to physically disabled individuals. For instance, the 2019 report published by the International Association of Public Transport reveals that urban cities such as Dakar have accessible bus transport. The report states that since 2014, Humanity & Inclusion (HI) has been running a program in Dakar aimed at improving access to employment for people with disabilities by enhancing safe and accessible urban mobility. This initiative has allowed more workers with disabilities to commute from home to work. HI, in collaboration with local Disabled Persons Organisations, has successfully advocated for gradual improvements in public bus transport. Dakar's largest bus operator committed to increasing the number of buses equipped with ramps and priority seating for people with disabilities. Additionally, the operator provided staff training on how to accommodate passengers with diverse needs and hired 25 people with disabilities to sell tickets. Other initiatives in Dakar include phasing out the old and unsafe 'cars rapides' (rapid buses)—colorful but outdated minibusses from the 1960s and 70s—and replacing them with a safer, more accessible fleet (International Association of Public Transport, UITP). This transition also creates new opportunities to address the mobility needs of physically disabled individuals, such as ensuring easy access from bus stops, providing priority seating, and incorporating audio and visual route information.

Another notable case study is the presence of an accessible public transport system in the city of Sao Paulo in Brazil. The report by the International Association of Public Transport reveals that the Line 4 project in Sao Paulo provides a state-of-the-art driverless metro system that increases accessibility to transport for physically disabled people. The accessibility measures ensure that accessibility extends beyond just the vehicles and stations to the surrounding areas as well. These features include tactile paving to help people with visual impairments detect hazards and find directions, clear signage (with tactile signs in some locations), modern and bright lighting, and well-trained staff available to assist passengers. Additional features include escalators and lifts, doors connecting the trains to the platforms, minimal gaps between the train and

platform, priority seating for people with reduced mobility, fare gates (not turnstiles) with wider options for wheelchair users, and fully connected trains that allow passengers to move freely within them (International Association of Public Transport, UITP). It is believed that adding these accessibility features only slightly increased project costs, but the benefits for people with disabilities, as well as the general public, are considered significant.

However, it is important to note that despite efforts made in these urban cities, some other cities fail to be adequate in providing transportation opportunities for physically disabled people. For example, London is considered an urban city due to its dense population, extensive infrastructure, diverse economic activities, and vibrant cultural life, all of which are characteristic of urban environments. However, London serves as a microcosm of transportation issues that apply to physically disabled people. An analytical study of London's physically disabled residents, written by Church et al., reveals that about 25% of individuals experience a lack of connection within the borders of London, which can be attributed to the inability of people to physically access opportunities because of travel difficulties (Church et al. 9). Physical barriers include factors such as public transportation challenges that cause people living in London to not be able to access opportunities, especially for physically disabled people.

Similarly, the report by the International Association of Public Transport also reveals that in Nairobi and other large urban cities in Kenya, accessing the small matatus, which are the primary mode of transport, poses significant challenges for people with disabilities. For instance, tricycles often used by physically disabled individuals are often too large to fit inside the matatus (International Association of Public Transport, UITP).

5. STRATEGIES TO ADDRESS THESE CHALLENGES

Tackling these challenges requires not only changes to the transport system but also policies to combat those factors that limit an individual's journeys at either end" (Church et al. 9). There is a need to adopt a multi-agency approach (Church et al. 9). Travel improvements on their own are not adequate to improve the urban environment of cities. Supportive policies are also required in light of social and economic factors that affect physically disabled people's ability to travel to and from their destinations (Church et al. 9).

Additionally, the government, non-profit organizations, and other relevant stakeholders should also collaborate with local Disabled Persons' Organisations to implement a program that will focus on advocacy and training for government officials and key stakeholders, including public transport service operators and owner associations (Jirgba et al.). This initiative will help raise awareness among drivers and other relevant persons about the needs of passengers with disabilities.

Furthermore, technology should be leveraged to improve public transport accessibility for physically disabled people. The use of ICT solutions should be explored to address safety and mobility challenges. For example, it can be used to enable disabled students to send advance notifications to bus drivers, ensuring they are picked up (Sze & Christensen).

6. CONCLUSION

The inaccessibility of public transportation experienced by physically challenged people can be seen in the complex interaction of accessibility, cost, and attitudinal barriers that pose a high obstacle to their full participation in society. Public transportation is often inaccessible, with narrow doorways and restrooms that preclude use by many, as well as the high cost of specialized transportation services. The most notable impact of this inaccessibility revolves around the social isolation and financial limitations that result from such limitations. People with disabilities face immense problems trying to access social activities, recreational opportunities, and, subsequently, employment. These lead to a reduced quality of life and other serious complicating factors in mental health. Economically, limited transportation means limited job opportunities because of the difficulty in commuting, and this translates into a higher cost of living due to dependency on more expensive specialized services. The inability to access basic services like healthcare, education, and government services creates a vicious cycle of marginalization that holds them back from achieving their potential.

Furthermore, case studies like London further illuminate the real-world impact of these issues, highlighting the specific challenges faced by local disabled communities and the shortcomings of existing transportation policies. Thus, it is recommended that urban planners, policymakers, transporters, and the public should work together to build a system of equity that presents physically disabled individuals with equal opportunities for mobile independence and a decent life

enjoyed by others. Finally, a city committed to transportation for all is not an international obligation but a reflection of its commitment to diversity and socialjustice.

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